169627

CH2M HILL

From: CH2M-HILL INC
P.O. Box 2090
Milw Wisc 53201

U.S. Environmental Protection Agency **Date:** 2/1/83

To: Region V
111 West Jackson Blvd.
Chicago, Ill 60604

Our Project No. W65130.00

IF MATERIAL RECEIVED IS NOT AS LISTED, PLEASE NOTIFY US AT ONCE

Attn: Jonas Dikinis

Re: Enviro-Chem site

WE ARE SENDING YOU

☒ ATTACHED ☐ UNDER SEPARATE COVER VIA

☐ SHOP DRAWINGS ☐ TRACINGS

☐ PRINTS ☐ CATALOGS

☐ DOCUMENTS ☐ COPY OF LETTER

☐ SPECIFICATIONS ☐ _____

COPIES	DATE	ITEM
1	2/1/83	Draft of IRM section of RAMP

REMARKS please review the draft IRM's and let me know your thoughts, reactions, etc to them

Dennis Tolyhe
CH2M HILL
(414) 774-5530

COPY TO _____

FORM 6
REV 3/77

3.2 INITIAL REMEDIAL MEASURES

3.2.1 Objective

The initial remedial measures discussed in this section are considered feasible and necessary to reduce imminent hazards to public health and the environment from the ECC site and are consistent with the requirements of Section 300.65 of the NCP. These hazards include the following:

- Potential contamination of local groundwater aquifers and drinking water supplies through pond and/or site discharges to the groundwater.

- Potential contamination of downstream surface water resources and drinking water supplies through cooling water pond overflows and/or leaks to neighboring surface waters.

- Potential fire and/or explosion of ignitables, leading to a massive discharge of contaminants to the air and neighboring surface waters.

- Potential contact with acutely toxic substances by nearby residents, workers and animals through air, drinking water, direct contact or food chain avenues.

Cost-effective considerations of the recommended initial remedial measures (IRM's) have been made in the context of minimizing or eliminating the potential hazards listed above. Significant visible actions at the site will also have substantial positive effect on community relations.

All initial remedial measures should be conducted in strict compliance with site Health and Safety Plan requirements. The plan should be developed consistent with the work to be performed and comply with:

- EPA Occupational Health and Safety Manual
- EPA Interim Standard Operating Safety Procedures and other EPA guidance as developed by EPA
- Indiana Occupational Safety and Health Act
- Site conditions
- Section iii(c)(6) of CERCLA
- EPA Order 1440.1 -- Respiratory Protection
- EPA Order 1440.3 -- Health and Safety Requirements for Employees Engaged in Field Activities

3.2.2 Recommended Actions

The following initial remedial measures (IRM's) are recommended for the ECC site:

- Sampling and analysis of local private wells.
- Construction of a new, secure fence around the site.
- Placement of warning signs around the site.
- Inventory of drums and bulk tanks.
- Removal of ignitable materials stored in bulk tanks.
- Consolidation of drums and removal of ignitable and extremely hazardous drums.
- Site surface runoff control.
- Cooling water pond treatment and discharge.
- Preparation and implementation of an onsite fire and explosion contingency plan.

Each IRM is discussed below. [illegible] areas of recommended action.

Sampling and Analysis of Local Private Wells

The contamination of local water supply wells presents a potential hazard to human health by direct contact and ingestion of contaminated groundwater. To guard against such a threat, a survey will be conducted to verify the locations of private residential, commercial and industrial wells within a 1/2 mile radius of the ECC site and to determine the nature and frequency of their use. Sampling and analysis will be performed to evaluate the immediate need to provide alternate water supplies. These analyses would also serve as background data on ambient water quality both upgradient and downgradient of the site, where possible.

All private well sampling and testing will conform to guidelines contained in the User's Guide to the U.S. EPA Contract Laboratory Program (CLP) prepared by the Sample Management Office of CLP and published August 1982. All groundwater samples are expected to be "low concentration" samples according to CLP criteria.

As a minimum, all groundwater samples should be analyzed for the following chemical properties or constituents:

- pH (field measured)
- Conductivity (field measured)
- Inorganic analysis package from U.S. EPA CLP
- Organics data package from U.S. EPA CLP

The groundwater sampling and analysis efforts should be closely coordinated with the Boone County Health Department and any of its ongoing groundwater monitoring work.

To provide an order-of-magnitude cost estimate for this IRM, it was assumed that 10 groundwater wells will be sampled once and analyzed. Analytical costs were based on recent U.S. EPA CLP costs for organic and inorganic analysis.

Fencing

The ECC site is presently fenced on the south side and a portion of the west side by a 5-foot high wood fence. The remainder of the west side and the north and east sides are fenced with a 4-foot high stranded wire fencing. The stranded wire fence is in disrepair along some stretches and can be easily stepped over. The wood fence is also in disrepair along the south site boundary.

During the site visit on January 20, 1983, animal tracks were observed throughout the site. Some of these appeared to be dog tracks. Apparently these animals have found access through the fencing, and it is possible that the dog(s) may be carrying contaminants into homes in the area. Several geese are reported to frequent the site also.

It is recommended that the wood and stranded wire fencing be replaced by 6-foot chain link fence with 3 stranded barbed wire. A locked access gate should be provided on the south side of the site.

Warning Signs

Ten additional warning signs should be placed on the fence and around the perimeter of the property to provide a clear, visible warning to unauthorized persons. The signs should state "DANGER--UNAUTHORIZED PERSONNEL KEEP OUT" in 3-inch

high letters, be constructed of galvanized steel with luminescent paint, and be visible from a distance of 25 feet. Signs should be placed at all gates or access points and at distances of approximately 200 feet around the perimeter of the property.

Site Inventory

A site inventory program is recommended to accurately determine the types and quantities of all wastes present and their locations on the site. Some of the inventory work will be required before removal actions; other inventorying will be accomplished to provide documentation during removal actions.

The site inventory will use the existing ECC material inventory information as a starting point. The new site inventory will confirm the previous data through contacts with generators and the sampling program outlined below. The inventory will accomplish the following:

- Determine the location, size and contents of all surface and buried (if any) bulk storage tanks.

- Provide a description of the various drum storage areas, detailing the number of drums and types and quantities of materials. Drums will be categorized and handled as shown in Figure 3-1.

- Conduct a random sampling of drums to confirm the accuracy of drum labels and drum manifests.

The detailed description of drum storage areas will include categorization of "good" or undamaged drums according to

waste types reflective of compatibility and disposal methods. These categories are:

- Strong oxidizing and reducing wastes.
- Organic liquids with low halogen content.
- Organic liquids with high halogen content.
- Strong aqueous acids.
- Strong aqueous bases.
- Aqueous bases contaminated with cyanide or sulfide.
- PCB wastes.
- Solid material.
- Empty drums.

The organic liquids will be further subdivided into solvents, oils and other organic liquids. Solid material will be subdivided into inorganic sludges, organic sludges and tars or residues.

To provide an order-of-magnitude cost estimate for the site inventory, it was assumed that all 47 bulk tanks would be sampled. To confirm the accuracy of drum labeling and manifest, it is assumed that 100 samples will be taken and analyzed. Analysis would include determination of the following general chemical features (as appropriate):

- ignitability
- corrosivity
- reactivity
- EP toxicity
- inorganic analysis package from U.S. EPA CLP
- organic analysis package from U.S. EPA CLP

The samples from drums and storage tanks are expected to be "high concentration" samples (concentration range 15 to

100 percent) according to sample criteria applied by the CLP. Because these are high concentration samples, they must be shipped as hazardous materials via a surface transport carrier (or nonpassenger aircraft) to a Regulated Substance Laboratory.

A 2-month turnaround of laboratory analyses is anticipated from the EPA Contract Laboratory Program.

Full-time inspection is recommended during all remedial actions to prepare daily diaries, records of all quantities removed, test results, and a final report. Such inspection will be essential to provide documentation of actions and quantities, and to provide decisionmaking guidance to the removal contractor. In addition, the agency inspector will be available to sample containers and areas as they are exposed.

To provide an order-of-magnitude cost estimate, it has been assumed that an individual will be onsite for a month.

Removal of Ignitable Bulk Tank Contents

The site inventory sampling results will identify bulk tanks containing ignitables or tanks in danger of leaking. These tanks pose a present and continuing hazard to public health and the environment due to the possibility of causing or contributing to explosions and fire onsite. A major fire onsite could be catastrophic due to the generation of toxic fumes and the release of contaminants into Finley Creek. Consequently, the ignitable contents of these bulk storage tanks should be removed and disposed of.

It is anticipated that the roughly one-half of the estimated 300,000 gallons contained in the 47 bulk tanks are

ignitable. Therefore, it has been estimated that 150,000 gallons of bulk storage ignitables will be removed from the ECC site as part of IRM activities.

Drum Consolidation and Removal of Extremely Hazardous Drums

Drums will be segregated and consolidated into groupings reflective of the compatibility and disposal methods listed earlier. The site inventory will provide data to organize labeled and manifested drums into compatible groupings. Drums of unknown content will be sampled to properly categorize the waste.

Drums containing extremely toxic and hazardous materials identified during the site inventory and others found during consolidation activities will be removed from the site following proper sampling and manifesting. Available data indicate a minimum of 223 drums are within this category.

Drums with ignitable contents will also be removed concurrently with the drum consolidation. It is estimated that as much as 50 percent of the 23,000 drums onsite fall in this category. The drum consolidation efforts will reduce the danger of fire and explosion.

Drum consolidation will require additional space outside the present drum storage areas. A 7-acre area to the west of the North drum storage area will be graded level, diked, and surface drainage control provided.

Site inspection activities will include documentation of drum removal. Each label will be removed from the drum as it is logged and removed. Each drum will be photographed if identification cannot be removed from the drum. All drum removal procedures will be completely documented so that the

source and contents of each drum, and physical evidence of this information is recorded to assist in future enforcement actions.

Site Surface Runoff Control

Site runoff currently collects in ponds on the south and north storage areas or runs off to the cooling water pond. During wet weather, the cooling water pond receives excessive runoff and overflows to the Unnamed Ditch. The cooling water pond will be maintained as a collection sump for site runoff and miscellaneous discharges during surface cleanup remedial actions. The water collected in the cooling water pond will be pumped to the trailer-mounted treatment system for treatment and discharge. Additional drainage channels may be required to convey water from ponded areas to the cooling water pond.

Surface runoff control will also be provided for additional areas designated for staging or drum consolidation. These areas will be diked and surface runoff directed to the cooling water pond.

Cooling Water Pond Treatment and Discharge

The water collected in the cooling water pond poses a continuing hazard to public health and the environment, especially from potential contamination of groundwater and neighboring surface waters. Both the north and south drum storage area ponds drain into the cooling water pond. Runoff from other areas of the site also drain to the cooling water pond. Consequently, the water in the pond is contaminated from leaking drums and site spillage.

During periods of heavy rainfall, the volume of water entering the cooling water pond exceeds its storage capacity. Contaminated water then overflows the east dike of the pond, down an embankment into the Unnamed Ditch.

The volume of the cooling water pond, when full, is approximately 1,000,000 gallons. It would be uneconomical to remove and transport the contaminated water to an acceptable offsite location for treatment and disposal. It would be better to provide onsite treatment for the contaminated water and discharge the treated water to Finley Creek.

A trailer-mounted treatment system will be located onsite and would be used to treat the contents of the cooling water pond. The treated water would then be discharged to Finley Creek.

To minimize the overflowing of cooling water pond contaminated water in the spring, the treatment system should be acquired and brought onsite as quickly as possible. Once onsite, the system will be placed in operation. By treating as much of the cooling water pond contents as possible prior to spring wet weather, the surge or available storage capacity of the pond can be increased. This should prevent any significant discharges of contaminated water to the Unnamed Ditch during wet weather or spring runoff.

The treatment system can also be used during the implementation of remedial actions to treat any surface runoff from the drum storage areas or groundwater that enters the pond. Once the surface cleanup activities have been completed, the pond contents can be pumped out for treatment. Final closure of the site, the pond sediments, site contaminated soils and other items will be covered under the remedial actions phase.

Fire Contingency Plan

A fire onsite could have significant consequences to area residents and to the water supply of the City of Indianapolis. Due to the many flammable substances packed within the relatively small area onsite, a fire would likely engulf the site rapidly. Air contaminants would be generated and would migrate offsite to the surrounding area. Fire fighting water and the contents of ruptured drums would flow from the site to the Unnamed Ditch and downstream. The following immediate responses would be required:

- Notification of local fire and police departments and the ISBH.
- Evacuation of nearby residents.
- Protection of Indianapolis water supply.

The contingency plan would include notification procedures and chain of command for each of the above tasks. Local fire, police, and health departments that would be involved would be contacted and the plan reviewed with them. Of particular importance would be the protection of the Indianapolis water supply. The plan would identify necessary steps such as the containment of discharges to Finley Creek with a temporary dam and rapid turnaround of sampling and analysis results of water from Eagle or Finley Creeks.

GLT90/3

IRM COSTS AND TIME SCHEDULE

Initial Remedial Measures	Estimated Cost Low($)	High($)	Schedule of Weeks 2 4 6 8 10 12 14 16
Sampling and Analysis of Private Wells	9,800	18,800	----------
Construct New Fence	14,900	20,500	- - - - - - --------
Provide Warning Signs	800	1,300	--------
Site Inventory and Inspection	187,000	214,000	----------
Removal of Bulk Tank Ingnitable Contents	71,000	188,000	- - - - - ----------
Drum Consolidation and Removal of Extremely Hazardous Drums	1,339,000	2,723,000	----------
Site Surface Runoff Control	5,700	10,500	-----
Cooling Water Pond Treatment and Discharge	300,000	800,000	----------
Fire Contingency Plan	3,400	5,900	-----
TOTAL	$1,931,600	$3,982,000	

GLT90/7